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NEWS ISSUE — JULY 1, 1948

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News of the Week

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Good Congress record seen on construction matters

No major upset in building seen likely as 80th Congress ends — Steel allocations rider discounted — Housing measure as finally approved called weak

By Vincent B. Smith

Washington—Nothing that Congress did during the session just ended is going to upset the course of construction in the next year. Some reduction in rental housing construction may be expected as a result of the limited housing law finally enacted, but private and public building will probably move ahead to higher levels or will hold their present rate.

This does not mean Congress took no action that affects or changes the direction of engineering and construction activity. In addition to the appropriation bills that furnish funds for federal and federal aid work, Congress acted on a number of measures that will greatly influence the future of the profession and the industry.

Steel allocation

But the foreign aid appropriation, finally passed in about the form desired by the internationally-minded, will not divert from the United States any larger quantities of construction machinery and steel in the next twelve months than went abroad in the last year. The steel priority for munitions contractors, written into the draft law, will be insignificant in its present effects, although it is interesting as a portent of what a later Congress might attempt to do for other types of government contracts, such as shipbuilding. The steel allocation was tied to another amendment that assured opportunity for small firms on munitions orders; it is an attempt to make certain that the little fellow gets his steel.

Industry allocations of scarce materials (as carried out voluntarily by business under the sponsorship of the commerce department) have merely nibbled at the problems—such as steel—so far. Congress specifically exempted these voluntary arrangments from the anti-trust law, preferring them to the government controls advocated by the administration. It is doubtful if these allocation programs—tediously arrived at in piecemeal form—will ever have any noticeable effect on distribution of steel or any other material entering into construction.

These voluntary agreements are intended to open up specific bottlenecks in production of needed items from scarce materials, they will not cause any large-scale changes in distribution of steel or any other material entering into construction.

Renegotiate military contracts

Congress decided to take the excess profits out of military orders. Accordingly, it made all 1949 military contracts, including construction contracts, subject to renegotiation at the option of the secretary of national defense.

A joint House-Senate committee decided that proposed bills to repeal the Taft-Hartley Law requirement of secret union-shop elections would do nothing to answer the problem—particularly in the industries, such as construction where employment is transient. The committee therefore made no recommendation, and the National Labor Relations Board will continue to hold the elections, complicated and difficult though they may be for the construction trades.

Stream pollution bill

A new stream pollution control bill authorizes technical assistance to the states by the U. S. Public Health Service in combination with financial aid administered through the Federal Works Agency to the states and municipalities. The bill sets up a five-year financial program totaling $126,500,000 to be appropriated year by year through action of succeeding Congresses. Enforcement of pollution abatement remains in the hands of the states, backed up by federal intervention acting through the states, when necessary, against violations on interstate streams.

Construction is not to be included in a census of business authorized for next year (results to be available in 1950). The industry will have to get along with the obsolete figures collected in 1939 and published in 1940. Users of construction census data will have their

(*Continued from page* 10)

Coordinate bid dates on federal work

Representatives of five federal agencies conducting major construction programs have agreed to establish a system to coordinate bid opening dates on similar types of construction projects involving $1,000,000 or more.

The improved bidding conditions to result are expected to prove beneficial alike to the public, the awarding agencies, and the contractors bidding on the jobs. Conflicts between bid dates of large federal and non-federal projects is to be avoided, the Associated General Contractors said.

The agreement was reached at a meeting of representatives of the five agencies and of the AGC, which agreed to participate by obtaining information regarding large state, municipal, industrial and commercial projects scheduled for bids, in order that federal projects could be advertised without conflict with similar non-federal work slated in the same areas.

Participating agencies which have appointed liaison officials to effect the bid opening coordination system are:

Bureau of Reclamation; Bureau of Yards and Docks; Corps of Engineers; Federal Works Agency, including the Bureau of Community Facilities, Public Buildings Administration, and Public Roads Administration, and the Veterans Administration.

A master chart of bid opening dates on large construction projects of these agencies will be maintained in the office of the Chief of Engineers.

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Appropriation measures feature work of 80th Congress for construction

Survey of actions shows greatest emphasis on money bills, little in new or changed legislation for year's work

The second session of the 80th Congress made a reasonably good record of engineering-construction legislation, a recapitulation showed last week.

From the viewpoint of business for the construction industry, the appropriations bills rank first in importance. In almost every case, the appropriated funds are less than budget requests, but the cuts are not so deep as to hamstring construction programs or greatly to reduce the volume of government and federal-aid work for the months and years immediately ahead.

One measure—not an appropriation bill but of equal force—that was outstanding was authorization of federal aid to states for highway construction. Under this law, Congress is legally bound to appropriate funds in the future to cover the federal share of approved road contracts entered into by the states. By way of explanation, contract authority included in authorization bills such as those for the Atomic Energy Commission and others, are in no sense binding—they simply permit the federal agency involved to make preliminary surveys and plans, paid for out of regular funds. Such authorization bills depend on future Congressional action.

In addition to appropriation and authorization bills, other measures affecting construction were passed. One of these was a housing bill, generally regarded as unsatisfactory.

Highways—Federal aid money for fiscal 1949 is available from uncommitted funds authorized in the Highway Act of 1944. For the following two years (fiscal 1950-51) H. R. 5888 authorizes $450,000,000 of federal aid to the states yearly, on a 50-50 matching basis; $37,500,000 a year for forest highways, roads and trails; $20,000,000 a year for national park roads, parkways and access roads; and $6,000,000 for Indian roads. PRA will continue to build forest highways in cooperation with state highway departments and the Forest Service. This bill for the first time transfers the funds for such roads from the Department of Agriculture to the Federal Works Agency.

For fiscal 1949, the Congress appropriated these funds: PRA, $435,658,854 (*ENR*, April 15, vol. p. 546); forest highways, $12,800,000 in cash and $7,500,000 in contract authority—a total of $20,300,000 available for obligation this year, nearly all for new construction; forest development roads and trails, $9,750,000; national park roads and trails, $3,110,000; parkways, $2,680,000 in contract authority for obligation in fiscal year '49. The Territory of Alaska received $7,370,000.

Corps of Engineers—For civil and military public works in fiscal 1949, a total of $555,000,000 in cash appropriations. Of this, $404,741,000 is for flood control; $166,989,100 for rivers and harbors, and $151,000,000 for military construction. Another authorization bill approved civil projects for future construction, including $62,000,000 of flood control works and $30,000,000 of river and harbor improvements. The corps also got $32,700,000 for military work, principally in Alaska.

Navy Construction—A total of $101,337,200 for obligation this fiscal year went to the Bureau of Yards and Docks for Navy public works: $51,337,200 in cash and $50,000,000 in contract authority. The appropriation took care in part of Navy projects approved in an authorization bill.

Bureau of Reclamation—Of $407,000,000 appropriated for the Interior

ADDITIONAL ENGINEERING MEASURES APPROVED BY CONGRESS

Public Law No.	Purpose
402	United States Information and Educational Exchange Act of 1948. For mutual understanding between the U. S. and other countries by (1) an information service to disseminate abroad information about the U. S.; (2) educational exchange service by interchange of persons, knowledge, skills; rendering technical and other services.
464	Amends the Housing and Rent Act of 1947. Extends rent controls to April 1, 1949; eliminates regulation requiring permission from the Office of the Housing Expediter for construction of amusement and recreational facilities; continues veterans preference (*ENR*, Apr. 8, vol. p. 525).
527	Authorizes construction of a building to house the United States Court of Appeals and the District Court of the United States for the District of Columbia by the Federal Works Agency. Bill also authorizes appropriation of necessary funds.
533	Authorizes the Federal Works Agency to construct a $22,850,000 General Accounting Office building in the District of Columbia.
546	Gives Congressional consent to the Carolina Power and Light Company to construct a hydro-electric power dam in the Lumber River, near Lumberton, N. C.
580	Consent of Congress to Idaho and Wyoming to enter into a compact dividing the waters of the Snake River and its tributaries.
618	Authorizes a $40,000 survey by the National Park Service and PRA of the Chesapeake and Ohio Canal with respect to constructing a parkway.
629	Authorizes construction of and appropriation for Kenewick division of the Yakima project by the Department of Interior.
654	Authorizes Maryland State Roads Commission to construct a bridge across or tunnel under Chesapeake Bay and the Patapsco River in Baltimore, Md.
H. R. 4816	Amends the Public Health Service Act so that every state would receive a minimum of $250,000 of federal-aid for hospital construction.

BILLS THAT FAILED TO BECOME LAW

H. R. 4833	To create an Interoceanic Canals Commission to study increasing the capacity of the Panama Canal (*ENR*, Jan. 22, vol. p. 100). Died in committee.
H. R. 4894	To regulate the practice of engineering and creating a Board of Registration for professional engineers in the District of Columbia. Died in committee.
H. R. 5475	To authorize construction and operation of plants to produce synthetic liquid fuel (*ENR*, Mar. 11, vol. p. 383). Died in committee.
H. R. 5609	Would authorize appropriation up to $200,000 to survey proposed Mississippi River Parkway (*ENR*, Apr. 29, vol. p. 618). Passed House.
S. J. Res. 111	Would authorize on a self-supporting and self-liquidating basis the St. Lawrence seaway and power project as provided for in the 1941 agreement between the United States and Canada (*ENR*, Mar. 4, vol. p. 340). Died in committee.

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department, the Bureau of Reclamation receives $251,541,139, as compared with a budget request of $277,957,650.

Money for construction in the 1949 fiscal year appropriation amounts to $229,984,510. The work schedule for some projects may have to slow down because of the reduction in appropriation. With an estimated $26,000,000 carryover from fiscal 1948, the construction program for reclamation this year could total some $225,000,000.

Atomic Energy — Of $501,850,000 cash and $400,000,000 contract authority granted the Atomic Energy Commission for fiscal 1949, about $298,000,000 is for construction obligation during the year, $126,000,000 from the appropriation and $172,000,000 from the contract authorization.

Public Health Service—To take care of grants-in-aid for hospital construction, the service was given $40,000,000 cash and was authorized to allot $75,000,000 to the states for fiscal 1949, the latter constituting a contractual obligation of the federal government to the extent that the states make use of it. Other funds received by PHS include: $8,000,000 contract authority for grants-in-aid for cancer research facilities; $5,000,000 appropriation and $25,630,000 contract authority for construction of other medical and mental health research projects. New responsibilities were assigned to PHS by a stream pollution control bill that passed at the end of the session.

Aviation Facilities—The second session gave to the Civil Aeronautics Administration $3,500,000 cash and $9,000,000 contract authority for airports at Anchorage and Fairbanks, Alaska; $3,000,000 appropriated and $37,000,000 in contract authorization for the Federal-Aid Airport Program, and $1,835,000 for Washington Airport.

Veterans Administration—Cash and contract authority to carry on the veterans hospital program will come out of $43,000,000 appropriated and $202,000,000 authorized to VA for this purpose.

Public Buildings—To the Public Buildings Administration Congress made a number of commitments, including $77,725,000 in contract authorizations for four buildings (one of them a hospital center) in the District of Columbia. Of this total, at least $6,500,000 is available in cash appropriations. The second session also set up $975,000 for a geophysical institute at the University of Alaska, $2,950,000 for work at St. Elizabeth's Hospital, and $3,079,000 for Howard University, both of the latter in the District of Columbia.

TVA—The Tennessee Valley Authority will be able to maintain planned construction schedules on two dams on the Upper Holston River, but it has to postpone indefinitely the start of a proposed steam generating station near New Johnsonville, Tenn., for which Congress refused to grant an initial $4,000,000 appropriation.

Flood Disaster—To relieve distress and make repairs in the flood-ravaged northwest, Congress appropriated $6,000,000 to the Corps of Engineers for levees and dikes, $10,000,000 for housing, $6,000,000 for loans and $500,000 for temporary relief, in addition to stepping up the lending authority of the Disaster Loan Corporation from $25,000,000 to $40,000,000.

Housing—A housing bill rushed through Congress in the last hours of the session increases the lending authority of the RFC's Federal National Mortgage Association to $840,000,000 (from about $250,000,000 previously) and authorizes it to purchase home loans—but not rental housing loans—guaranteed under the GI act or insured by FHA. Loans cannot exceed $10,000 per dwelling unit, must be offered to FNMA by the original lender, and must apply to property meeting FHA Title VI construction standards. The amount purchased by FNMA cannot exceed 25 percent of the lender's portfolio of such loans.

U. S. Army Corps of Engineers

SMALLER STREAMS TOO—While the Columbia River was going on its rampage, smaller tributary streams added to the general damage in the Pacific Northwest. Here the Kootenai River has flooded out the business section of Bonners Ferry, Idaho.

Northwest counts cost as floods ease

The British Columbia legislature was called for a special session beginning July 7 to discuss rehabilitation of the Fraser River valley, leading a series of moves as the Canadian area and the U. S. Pacific Northwest began to emerge from recent flood waters.

At the same time, Governor M. C. Wallgren of Washington announced he was giving serious consideration to calling a special session of the state legislature to appropriate funds for rebuilding homes and rehabilitation of damaged farm land in the wake of the destructive floods along the Columbia River and its tributaries.

In British Columbia, a two-man relief and rehabilitation commission consisting of Maj. Gen. B. M. Hoffmeister and Eric W. Hamber, former lieutenant governor, has already reported to Ottawa and Victoria on their findings from an exhaustive study of the Fraser River damage, but details of their recommendations have not been released.

It was learned that Canadian federal and provincial authorities have agreed on a complete reconstruction of 200 miles of dikes in the Fraser Valley to cost somewhere near $12,500,000.

Pacific Northwest bails out

As the Columbia River flood waters also receded, two major Columbia River bridges—the Portland-Vancouver and Pasco-Kennewick spans — were reopened to traffic. Army engineers at Portland reported that they had saved the $43,000,000 Troutdale, Ore., aluminum plant by dumping 29,000 cu.yd. of gravel across the Columbia River Slough near Portland. However, damage in the Seattle Engineer District alone—including the Columbia basin as far south as Pasco, Wash.—was estimated roughly at $23,000,000 to building, dikes, roads and other structures.

FOREIGN DEVELOPMENTS

GREEK RAILROAD AND HIGHWAY SYSTEMS are being rebuilt under direction of the U. S. Corps of Engineers. Map shows location of important works.

NEARLY 1,000,000 CU. YD. of material blasted into the narrow, deep Corinth canal is being removed by U. S. contractors.

Greece—Transport experts of the United States and the Greek Government are this month beginning a comprehensive survey of this country's facilities. At the request of the Greek government, the survey group will attempt to set up priority schedules for rebuilding and improving rail, highway, coastal shipping and air transport facilities.

The survey is the latest step in a recovery program that has been under way for some years. The UNRRA and the British first gave the Greeks aid in rebuilding transport facilities wrecked by the retreating German armies, and since last year the United States has furnished technical and material assistance under the Greek-Turkish Aid Act of 1947.

Plans for the current survey grew out of an inspection trip last April by Robert O. Swain of the Transportation Division of the U. S. State Department. With work on the emergency projects now well started, the Greek government felt that the time had come to look over the whole broad field of transportation and decide where limited funds could best be invested.

The survey is conducted jointly by the American Mission for Aid to Greece, and the Economic Cooperation Administration, for the United States. The leader of the field group is Cecil Calvert who, since 1945 has been head of the Highway Branch, Transport Div., Office of Military Government in Germany.

The survey group will use twin gages for measuring transport possibilities: first cost and upkeep. Investigators are looking for projects that can be financed out of U. S. aid and Greek resources—projects that will return more than their keep after they are completed. The screening process will attempt ot eliminate improvements that would cost too much to maintain.

Sure choices for serious consideration are rail and highway routes that connect Greece with adjoining countries, and that can be used when international conditions permit. The group will also study practicability of opening up outlet routes for farm products from agricultural areas that now are undeveloped or handicapped by poor transport.

Coastwise shipping has always been an important feature of Greek transportation, because inland transport routes are restricted to valleys some distance from the coast. For many Greek islands such as Crete and Rhodes air transport will probably be the answer.

Reconstruction progress

Since the U. S. program began operating 12 months ago, $25,000,000 has been allotted to reconstruction, $21,000,000 for heavy work on transportation projects, and $4,000,000 for housing and industrial facilities.

In addition to these dollar funds, drachma expenses in Greece are covered by the aid program. By arrangement, money obtained from sale of food and consumer goods supplied by the United States is poured back into Greek aid, and a good part of this money goes into reconstruction. This added financing made it possible last summer to award construction contracts to two groups of American firms for work then estimated to total $81,500,000 (*ENR* Aug. 14, 1947, vol. p. 227).

Heavy reconstruction work is being done under the direction of the Corps of Engineers, with Colonel David W. Griffiths as district engineer for the Grecian District, attached to the North Atlantic Division.

Contracts in force at present include:

Railroad and highway reconstruction, originally set up to cost $64,000,000—is being executed by Atkinson-Parke-Drake made up of Guy F. Atkinson, San Francisco; Starr, Parke & Freeman, Chicago, and Johnson, Drake & Piper, New York. Port facilities at Piraeus and Salonika are being rebuilt and the Corinth Canal is being cleared by the Steers-Grove group (J. Rich Steers, Inc., and Grove-Shepard, Wilson and Kruge, both of New York), under a contract set last summer at $17,500,000.

The U. S. firms use local contractors and labor to the greatest extent possible, but rely on their own staffs for technical know-how and supervision on heavy work. Army engineers assist in field surveys and plans, arrange for procurement of imported materials and equipment, and take care of finances, including management of Greek funds turned over to the reconstruction's account.

At present, about 7,500 Greeks are employed on all reconstruction projects, in addition to about 430 U. S. citizens employed either by the Corps of Engineers or contractors. All U. S. aid operations in Greece, including the entire reconstruction program, are under control of the American Mission, headed by Dwight P. Griswold.

Specific problems

Altogether, Greece has about 9,000 miles of improved roads. The American Mission is rebuilding 12 projects, covering 1,000 miles of track route between the larger cities. About 15 percent of this mileage is completed.

Typical roadway width is about 19 ft., the surface generally is blacktop on crushed stone. Hundreds of highway bridges are being rebuilt, most of them in native stone. On the national highway between Piraeus and Patras, a temporary Bailey bridge over the Corinth canal is now being replaced with a 260-ft. steel deck truss span, 180 ft. above the water.

Almost the entire 1,700 miles of Greek railroad trackage was put out of service by German demolition. Two

blasted tunnels are now being reopened, and reconstruction of 14 bridges is under way.

Reopening of the Corinth canal—a sea-level cut more than three miles long—is important to Greek shipping since it will save 200 miles of travel between the east and west coasts. The Germans blocked the canal with blasted slides that totalled nearly 1,000,000 cu. yd. of material. Contractors expect to have the ditch open to traffic early in July.

Reconstruction of quays and harbors is well along at the two ports included in the present program—Salonika and Piraeus.

With the funds provided by Congress during its last week in session, the Economic Cooperation Administration will be able to extend and enlarge some of the reconstruction work already started. Repairs to the port of Volos for example had to be dropped when construction aid for Greece was pared, but plans are now being drafted to go ahead with this job when and if money becomes available.

British Combine photo

AUSTRALIAN POWER SCHEME—Taking advantage of the rugged terrain and the steady flow of the Kiewa River and its tributaries, the State Electricity Commission of Victoria, Australia, is now pushing construction on its $83,000,000 Kiewa River Hydroelectric Project (*ENR* March 11,vol.p.386). Five of the six power stations will be underground, and power production for the whole project is expected to exceed 1,000,000 kwh annually.

Airports . . . .

Italy—An inter-ministerial committee set up for the study of preliminaries for construction of a new airport to serve Rome, recently selected a site in the neighborhood of Finumicino, 20 kilometers from Rome near the mouth of the Tiber River.

The commission also approved a plan drawn up by its technical committee providing for the construction of six runways, each 3,000 meters long, with central services, a highway to connect the airport with Rome, and highway connections with the Rome-Austria speedway. Three of the runways are expected to be completed before 1950.

The cost of the first part of the program, exclusive of road and railway connections, is estimated at $20,000,000, and the government is now preparing an appropriation of $4,400,000 for purchasing this site and leveling the ground.

Although there has been no official announcement as to how the port will be constructed, well-informed sources report that it is expected that an association or company will be formed to finance the enterprise, with or without participation of the Italian government. Definite offers for financing have already been received from foreign financial groups, among whom are several U. S. organizations.

Puerto Rico—Construction of the first part of the proposed Isla Verde International Airport, to cost about $1,600,000, was approved recently by the Puerto Rico Planning Board.

The Puerto Rico Transportation authority will undertake construction of this project, following an announcement that the U. S. Navy had withdrawn its opposition to the construction of the airport at the site selected. The Navy at first objected that the airport would interfere with the operations of a Navy radio station near the site.

Ports and Harbors . . . .

Australia—The first retaining wall of what is said to be a new and unusual design has been completed by the Maritime Service Board of New South Wales as part of an extensive project to renew structures in Sydney Harbor.

The wall is made up of precast units of four types: a box or trestle; a cover slab; a curtain slab, and a deck slab. All of these components may be handled by a 5-ton mobile crane.

The boxes or trestles are set at or near low-water level at 10-ft. centers on a prepared ballast bed. This spacing corresponds to the location of the piles in the wharf structure behind which the retaining wall is constructed. The cover is an 8-in. reinforced concrete slab which spans two adjacent boxes from center to center, and is provided on the landward edge with an apron. Curtain slabs fit into vertical slots on the sides of the boxes and form with the front walls of the boxes a rat-proof wall against the harbor water.

The deck slab is the final unit placed, to connect the wharf decking to the fill on the cover slab.

The wall is designed to support 10 ft. of fill with a surcharge loading of 1,000 lb. per sq. ft. About 16 cu. ft. of concrete is required per linear foot of wall.

Miscellany . . . .

Colombia—A $150,000,000 national budget includes more than $45,000,000 for the Department of Public Works.

Almost one-half of this sum will go into the construction of new roads, bridges, and hard surfacing of other roads.

China—The Chinese Government Banks have approved a loan of more than $50,000,000 for the construction of a power plant at the Whampao Harbor, near Canton, and for construction of warehouses throughout the country.

England — Britain's second large-scale atomic energy pile will be in operation this summer, the Ministry of Supply announced recently.

The big pile, at Harwell in Berkshire, will produce enough radioactive isotopes to supply the needs of all the medical and other scientific research workers investigating peaceful uses of atomic energy in Great Britain. It will also provide the first domestic application of atomic energy by providing heat for all the buildings at the Harwell research station.

This pile will be a big-brother to the "Gleep" (graphite low energy experimental pile) which was set going last year.

India—A 240-mile highway link between Assam province and the remainder of India is expected to be completed within a few months. The $2,250,000 project runs from the town of Kisheganj in Bihar province, to Golakganj in Assam.

Engineer scores Interior department, urges curbing federal power activity

Gen. Robins declares water resource development by U. S. should be carefully controlled—Calls for greater state powers

Development of water resources, now a matter of national concern, is legitimate activity for the federal government only within carefully prescribed limits, according to a paper by Maj. Gen. Thomas M. Robins, (retired) former Assistant Chief of Engineers, now a consulting engineer in Portland, Ore.

The main theme of General Robins' paper presented at the annual convention of the Pacific Coast Electrical Association in San Francisco recently, was that present activities unwisely go beyond these limits. Reviewing conditions that have led to this conclusion, he first referred to the succession of laws on this subject enacted in a period of almost three decades, then said pointedly that in passing these laws Congress had expected them "to be interpreted with reason and tolerance and that they would be administered with fair dealing and due regard to economics. This expectation has not been realized."

"In the case of the Tennessee Valley Authority," he said, "it is clearly the intent of the law that a proper proportion of the capital investment should be allocated to power projects and that these projects should be made self-liquidating. This has not been done. Flood control benefits have been grossly exaggerated to reduce the capital cost allocated to power, and interest charges on capital investment are ignored in computing the revenues."

In pursuit of the "fetish of cheap power," General Robins said, the Interior Department has interpreted the reclamation laws to mean that interest on first cost of power facilities should not be paid into the Treasury but applied to repayment of a part of the first cost of irrigation work. In short, the laws are apparently being administered by the Interior Department with a view to socialization of industry in the U. S."

Present laws adequate

Existing laws, he said, could well be used as the framework of a rational basis for federal power development and "proper administration of the laws can promptly be secured by a thorough house cleaning in certain government departments and bureaus."

General Robins suggested six provisions that this new legislation should contain, namely:

(1) The federal government will participate in power production and transmission only in connection with the construction of multiple-purpose water conservation projects; (2) Five percent of the gross proceeds received from sale of surplus power from any federal project shall be paid annually in lieu of taxes to the state in which the project is located; (3) In marketing surplus power from federal projects there shall be constructed or acquired only such transmission lines and related facilities as may be necessary to make the power available in wholesale quantities at transmission voltages on fair and reasonable terms.

(4) Priority in the sale of surplus power from federal projects shall be given only to those public bodies and cooperatives engaged in the utility business that come under regulation of state public utility commissions. Purchasers of such power shall pay a surcharge over established rates in lieu of federal income taxes.

(5) Rates for sale of surplus power from federal projects shall not become effective until approved by the Federal Power Commission and shall at least be sufficient to cover (a) cost of maintenance and operation of power production and transmission facilities, (b) payment to state in lieu of taxes, (c) interest on the capital investment allocated to power at the rate of 2½ percent, (d) amortization of capital investment on a 50-year basis, (e) cost of interim replacements of power facilities, (f) repayment over a 50-year period of capital costs not allocable to power but which must be repaid from power revenues in order to make the projects self-liquidating.

(6) All proceeds from the sale of power shall be deposited in the Treasury of the United States as miscellaneous receipts except those needed to repay irrigation investments assigned for return from power revenues.

Continued expansion of federal power production through the building of fuel burning plants, General Robins characterized as "nothing short of rank socialism." Unless fairness and justice are applied in interpretation of existing power laws, he said, "a minority will continue to enjoy tax relief at the expense of the majority of our citizens."

"It seems clear to me," he concluded, "that our system of free enterprise is doomed unless something is done without delay to put federal participation in power production and transmission and the operation of public bodies and cooperatives on a business basis that will be fair to all taxpayers in the United States."

Reclamation, Army plan same dam

The Army Engineers and the Bureau of Reclamation on the same day recently made public separate reports favoring construction of a high dam in Hell's Canyon of the Snake River, between Lewiston and Weiser, Idaho.

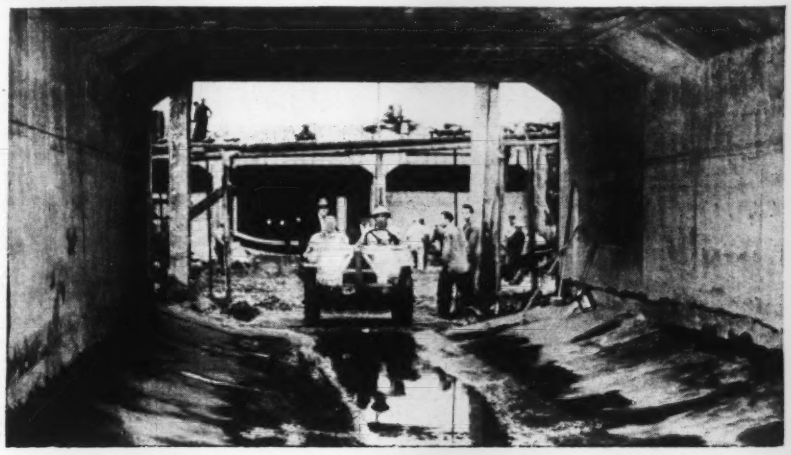
The Army Engineers propose a 710-ft. dam with an 850,000-kw. power plant 102 miles below Weiser, and the Reclamation Bureau proposes a 740-ft. structure (slightly higher than Hoover which is 227 ft.) 104 miles downstream from the same town, with 900,000 kw. of power.

Despite their height, the location of the dams in a steep sided canyon limits the useful storage of the Army Engineers' proposal to 3,280,000 acre-ft. and the capacity of the suggested Reclamation reservoir to 4,400,000 acre-ft. The Army plan includes a re-regulating dam 10 miles downstream. Both projects would tie into the comprehensive program for development and control of the Columbia River and its tributaries.

As pointed out by Interior Secretary J. A. Krug, the reservoir in a deep canyon could not supply water directly for irrigation, but the power revenues could assist development of nearby irrigation projects not otherwise economically feasible. The Reclamation report, now submitted to the governors of Columbia River Basin states, calls for installation of nine 100,000-kw. generators to produce 4,000,000,000 kwh. per year. The Army Engineers would install ten 85,000-kw. units and build the foundations for four more.

Estimated costs of the alternate projects are $358,400,000 (based on December, 1947, prices) for the Corps of Engineers plan and $433,660,000 for the Reclamation proposal. The two agencies attached special significance to the reports at this time, because the proposed project, when operated in conjunction with other storage and flood control dams of the comprehensive plan, would have an appreciable effect in reducing floods. The Army report was prepared by the Portland District and North Pacific Division engineers at Portland, Ore.; the Reclamation report originated in the office of Region I, Boise, Idaho. Despite the coincidence of publication, both reports are said to be the result of Congressional requests.

Random Lines *from an editor's notebook . . .*



. . . . in which are recorded some impressions on riding through a sewer in a jeep caravan

N. Y. World-Telegram Photo

Something new in public-works inspection trips took place last week when fifty engineers and officials of the Borough of Queens in New York made a 4-mi. tour of a storm-water sewer in open jeeps. The new sewer, the first mile of which is a triple-box structure divided into 16-ft. wide sections 10 ft. high, is said to rank as one of the largest in the world.

Not only was the event noteworthy because of the novel method of transporting the inspection party underground, but it served to dramatize the existence of a type of municipal improvement that generally passes unnoticed by the public.

Originator of this idea to develop taxpayer's interest in a sewer was William Raisch, consulting engineer to the borough. How well his showmanship succeeded was attested by the presence of a score of news photographers, reporters and a television cameraman, all of whom found this affair far from a routine assignment and so reported it in picture and story.

To begin the inspection, the party travelled by jeep to an open shaft near the discharge end of the sewer, where the 15 little vehicles were lowered into the tunnel by a crane. Lined up in the center section of the three-box sewer, the caravan started off at a 5-mi. pace. The headlights and daylight entering from manholes at frequent intervals, furnished illumination for adequate visual inspection.

The sewer got smaller near its terminal end and finally the caravan found itself travelling through a single corridor about 8 by 10 ft. in section. At the end of this section, everybody got out to climb a manhole ladder to the surface.

Appropriately enough, the sewer empties into Flushing Bay, an arm of Long Island Sound; the point of exit for the inspection party at Fresh Meadow likewise seemed appropriate. Location of the big $10,000,000 sewer through a series of public park lands interconnected by a "corridor" park strip, was a happy solution to the problem of securing a cheap and accessible route through a developed area.

The sewer, which will collect storm-water drainage from an area of some 63,000 acres, will add to the desirability of building sites for some 75,000 homes. In fact, the decision of the New York Life Insurance Co to begin construction of an 11,000 person housing project at Fresh Meadows was influenced by installation of the sewer.

Commissioner of Borough Works, Maurice A. Fitzgerald, paid tribute to the contractors on the sewer—Delhan Construction Co.; Gull Contracting Co.; Hendrickson Bros., Spearin, Preston and Burrows; Tully and DeNapulis; and the Vachris Co.—saying that they did a speedy job under trying conditions of terrain and bad weather. The job, which was estimated to require two years, is 90 percent completed. William H. Bertram, engineer of sewers and Frank Keegan, project engineer were also lauded for their work.

John C. Reidel, chief engineer of the N. Y. City Board of Estimate, admitted that he was no stranger to sewer inspections, but this was the first time to his knowledge that such a tour had been made in jeeps.

Your reporter, who emerged spotless from the sewer only to spill chicken gravy on his suit at the luncheon, was thoroughly dismayed by the hazards one encounters on inspection trips.—*EJC.*

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Industrial Construction — Canadian Western Timber Co., Ltd., will go ahead at once on the erection of a $25,000,000 pulp mill at *Duncan Bay, Vancouver Island, B. C.* . . . A $2,000,000 plant for production of sheet glass is being designed and built at *Okmulgee, Okla.* for American Window Glass Co. by Rust Engineering Co., Pittsburgh, Pa. . . . Groundbreaking ceremonies for Mount Zion's new $6,000,000 hospital in *San Francisco* were held June 17. Engineers, Ltd. is the construction contractor. It is a six-story and basement addition. . . . Construction of a $750,000 housing project for 95 families will begin next month in *Boise, Idaho.* Virgil G. McGee and J. L. Eberle, the builders.

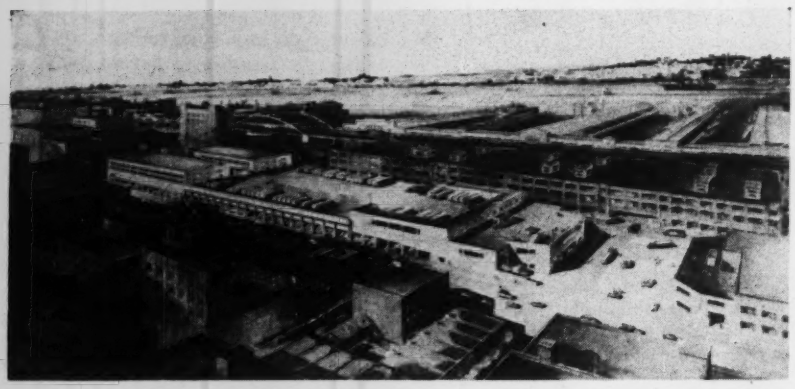
Public Construction—Contract for Custer County courthouse at *Miles City, Mont.*, went to Boespflug Construction Co., Billings . . . Canada may build apartment houses at *Ottawa, Ont.*, for members of Parliament . . . Bennett & White Const. Co., Ltd., have the contract for a 100-bed unit at the mental hospital at *New Westminster, B. C.*

Water Supply and Sewers—Work on a $1,250,000 pumping station at *San Francisco's* Lake Merced plant will begin this fall. The plant is designed to provide a booster station for the peninsula pipelines to increase the water pressure in high level areas. *Billings, Mont.*, is taking bids on a $700,000 sewer improvement and extension program. It calls for 8,371 ft. of 18 and 27-in sewer trunk lines to connect with an intercepting line.

Labor—Work has been resumed on construction delayed by a wage dispute between the *Jamestown, N. Y.* Builders Exchange and Local 66, Carpenters' Union, AFL. The carpenters were granted a 12½-cent raise to $2 an hour. Common laborers also have been granted $1.50 an hour.

Correction—It should have been stated in our June 3 issue that Surveyer, Ninniger & Chenevert, of Montreal, Que., are consulting engineers on the all-aluminum arch bridge to be built by Arvida, Que., across the Saguenay River.

MUNICIPAL AFFAIRS



TO EASE TRAFFIC—Designed to ease traffic congestion in lower Manhattan, this union truck terminal will be built by the Port of New York Authority at a cost of about $9,000,000. To be completed in 1949, the terminal will handle about 2,000 tons of freight daily, serving as a trans-shipping point from long-haul motor carriers to smaller trucks used in city deliveries.

Two cornerstones were laid in the New York metropolitan area on June 24 to mark the formal start of work on two great union truck terminals that are expected to reduce materially the congestion produced by trucks on the streets of the two great cities of the district, New York and Newark. Actually, construction of the buildings has been under way for some time.

Both buildings are being erected by the Port of New York Authority as part of its plan for improving freight handling in the metropolitan district, a plan which was inaugurated in 1932 with the building of a big inland terminal in the block between 15th and 16th St. and 8th and 9th Ave., on Manhattan Island for consolidation of less-than-carload freight shipment for movement by truck to railroad yards in New Jersey.

Trans-shipping point

These new terminals have a somewhat similar function. Long-distance trucks will bring their freight to them for segregation and delivery by local trucks to the several zones into which the city is to be divided. For example, all freight for the garment manufacturing region coming in on several long haul trucks will be assembled in a specified area in the terminal to be picked up by trucks servicing the garment center exclusively. As a result, only one truck instead of several will need to move through that crowded area to make numerous deliveries. Reverse movements will be made in a similar way.

The two terminals are similar in design—the one at Newark, located near U. S. Highway No. 1, being somewhat larger (1,152x200 ft.) than the New York building.

The New York terminal will occupy a whole block near Canal and West streets, just north of the Holland Tunnel. It will be 1,000 ft. long and 160 ft. wide, one story high except for the office structure at one end. This letter section will be of reinforced concrete, three stories high. The truck terminal has a steel frame encased in concrete, the roof being designed to permit the parking of 70 complete tractor-trailer units. The roof area is reached through ramps at the north end of the building.

At ground level is a central platform 800 ft. long and 80 ft. wide with bays for 77 trucks to back in on each side for delivery and pickup of freight. Above this platform, hung from the roof girders, is a dispatchers gallery where all way-bills will be processed; and an overhead trolley system for moving dollies loaded with freight from truck to truck.

This terminal will cost $9,000,000, and the Newark station $7,000,000. Both are expected to be completed in October, 1949. Most of the steel work for the New York building has already been put in place.

The terminals were designed by the port authority's engineering staff, of which John M. Kyle Jr., is chief engineer. Engineer responsible for design of the structures was Rudolph F. Schaefer. Contractors on the New York building are: Grove, Shepard, Wilson & Kruge, foundations; American Bridge Co., steel. No contract has been awarded for the building itself, although bids were opened on the work recently.

Contractors on the Newark building are: J. Rich Steers Co., test piles and load tests; Stock Construction Corp. foundations; Harris Structural Steel, Inc., steel work.

Adopt cut-and-fill

The Los Angeles County Board of Supervisors recently approved a contract to operate a 1,117-acre fill-and-cover rubbish dump, which the supervisors estimated would accommodate disposal needs for the next 25 years.

Use of this system of rubbish disposal may delay for some time action on the pending $20,000,000 city-county incinerator-building program. County Mechanical Engineer R. E. Shonerd recommended to the board that it postpone asking for bids on a proposed county incinerator for which plans have already been prepared.

Mayor Fletcher Bowron had earlier announced that the city will not officially accept a new $900,000 incinerator which has been a center of controversy for many months (*ENR* Jan. 29, Vol. p. 150)—until further tests have been made.

His decision followed receipt of a letter from the Griffith Co., builders of the plant, stating that the company had completed tests and was ready to turn the incinerator over to the city.

The Bak Disposal Co., which was awarded the county fill-and-cover contract, said that the dump will be located on swamplands, and dumping will be permitted on two sites, one at the tract itself for a fee of $1.25 a ton, and the other at a ramp to be constructed near the dump where the fee will be $2 per ton. Property owners in the vicinity are to be protected from any nuisances arising from the disposal operations, should any occur, county officials said.

Sewage Disposal

Sewage disposal programs—some of them dictated by state sanitary organizations—proceeded during the week.

At Indianapolis, Ind., the City Sanitation Commission approved construction of two interceptor sewers to cost $250,000, along Fall Creek from 30th St. to the Millersville Road, and Bean Creek near Keystone and State Aves. The sewers will be part of an overall $3,785,000 sewer improvement program for the city.

At San Diego, Calif., the city awarded a $1,350,000 contract for enlargement of the city's bayside sewage treatment plant to M. H. Golden Construction Co. of San Diego. The bid was $200,000 below city engineer's estimate.

At Philadelphia, Pa., the State Sanitary Water Board approved a permit for the additional units required for completion of the city's Northeast sewage

treatment works. The permits cover the construction of the treatment units, blower building, sludge storage tanks, and appurtenances. Contracts now under way at the site invite an expenditure of $9,000,000.

Bond Issues

Bond issues for civic construction projects were approved by voters of many western states in elections during the last month.

In California, San Mateo County voters endorsed a $3,225,000 issue for a high school in the San Bruno area; bonds totaling $1,250,000 for the construction of a high school in Menlo Park and additions to the present school in Redwood City, and a $1,500,000 issue for a tuberculosis hospital to be located near Redwood City. Alameda County voters approved a bond issue of $2,840,000 for new schools and improvements. Marin County voters passed a $950,000 sewer bond issue for the San Rafael Sanitary District project.

In Utah, voters at Midvale, Sandy and Lark approved a $750,000 bond issue for the construction of four new schools and repair of present buildings.

Oregon voters favored a $815,000 bond issue for expansion of sewage disposal system at Salem, a $540,000 bond issue in Eugene to restore a mill race, control a creek and modernize the fire department; a $320,000 bond issue for additional grade school facilities at Seaside; and a $180,000 bond issue to build a fire hall at Albany.

Smoke Abatement

Philadelphia's on again, off again, smoke abatement program got under way once more last week when the City Council Finance Committee approved an ordnance creating a division of air purification control and appropriated $52,060 for its operations.

A companion measure setting up rules and penalties for failure to obey them is now being drafted.

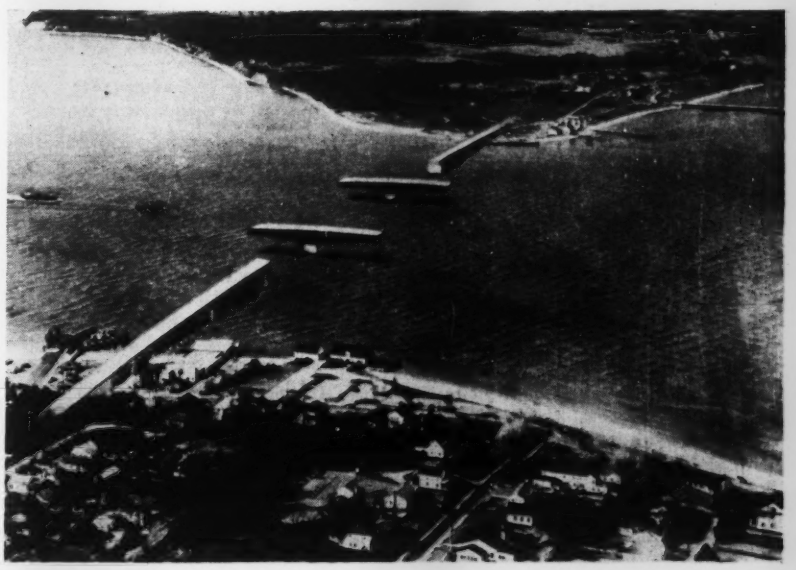
In January, the program was scheduled to start but was shelved ostensibly because of lack of funds. Considerable criticism was directed at the program at that time when components protested that almost the entire sum allocated would be for personnel.

The money provided for the new division was obtained through transfers within the Department of Health in which the smoke abatement division will be placed.

At Los Angeles, the County Board of Supervisors were told that every industry should be held responsible for "smog" conditions, but that small industries are not blamed much.

Professor H. F. Johnstone of the University of Illinois made a formal report to the Supervisors after a week's study, and named woodworking plants and lumber mills as the chief offenders among the small industries. He added that domestic sources such as rubbish disposal dumps were also contributing to the nuisance, and minimized the importance of automobile exhaust and fumes from diesel engines on trucks and buses in this problem.

Commenting on the oil refining industry, which has been named as the major offender in previous studies, Mr. Johnstone said that "certainly refinery operations can be modified to increase the percentage of the sulphur converted to hydrogen sulphite to be recovered".



DOUBLE DRAW—Designers have come up with a unique idea to provide a shipping channel through the proposed bridge at historic Yorktown, Va. Two 500-ft. long swing bridges, used in tandem, will provide a 450-ft. clear central opening when the spans are operated. The effect has been compared to that of a doubleleaf bascule, with horizontal rather than vertical motion, and with the balance furnished by symmetrical construction rather than counterweights. The bridge will be built by the Virginia State Highway Department, for which W. R. Glidden is bridge engineer; Parsons, Brinckerhoff, Hogan and MacDonald, consulting engineers, of New York, are designers.

City Planning

Citizens of Kokomo, Ind., got their first look at an entirely revamped zoning plan for the city, when preliminary maps were released by the City Planning Commission.

Under preparation by Planning Services, an Indianapolis firm engaged to draw up a master plan for the city, the zoning plan is based on the population survey will indicate present position of industry and residential developments.

Officials point out that the city's existing 20 year old zoning ordinances do not take account of later developments, and that the old ordinances have been politely disregarded in late years to accommodate the rush for housing.

Voters at St. Louis, Mo., on November 2 will be asked to decide whether the city shall issue $16,000,000 in bonds to finance a major slum clearing project in the central section of the city. The Board of Aldermen have passed a bond issue ordinance. Under the plans of the St. Louis Anti-Slum Commission, a 54-block area in the center of the city has been selected for progressive development.

Minneapolis, Minn., considered the acquisition of four sites in the downtown area to accommodate 792 cars

Seattle, Wash., considered a recommendation for early start of a high-level bridge over Lake Union and a new north-south highway through the city; and the Massachusetts State Assembly considered a bill already approved by the Lower House that would permit construction of tax free municipal garages to ease traffic problems. Rye, N. Y. voters approved a total of $1,545,000 in bonds to finance civic improvements, including an off-street parking space.

There was also the announcement that the City of Miami, Fla., will convert the interior of two airplane hangars at Dinner Key into a 10,000-seat city auditorium, and that a $5,000,000 sports area and auditorium is planned for San Diego, Calif., to be built by Arctic Auditorium, Inc., a private concern.

Congressional construction record

(*Continued from first page*)

next chance in the Business Census of 1954. If they make sufficient demand to the Census Bureau and to Congress, they may get an industry census then.

Congressional concern over the Supreme Court decision upholding a Federal Trade Commission order against the Cement Institute and a number of portland cement companies produced one definite action. The Senate authorized a full inquiry into existing laws and Supreme Court interpretations affecting the basing point or freight equalization system of pricing, and the impact upon large and small business of maintaining or discontinuing this system. The investigating committee is to report its findings and recommendations not later than March 15, 1949.

After the Senate had passed a new Science foundation bill, the House failed to act on it. There is strong doubt that President Truman would have signed the measure anyway; it diluted executive control to a degree that probably would have made it unsatisfactory to the White House. A previous bill had been vetoed on those grounds in 1947.

Housing bill weak

Housing came up with a thin bill at the end of the session. After leaders had denied the House a vote on the controversial features of a long-range housing measure, a last-minute palliative was pushed through in final hours. The measure increases RFC authority to buy GI as well as FHA insured house loans. This secondary market should help mortgage financing in areas where GI 4 percent loans have been hard to get.

Failure to extend FHA Title VI strikes a blow at rental housing in particular. Insured loans under Title VI could be used to build rental units at costs up to $1,800 per room. Title II, the permanent title under which all FHA loans now are made, restricts room cost of rental units to $1,350, too low for today's prices.

President Milton Brock of the National Association of Home Builders makes a pessimistic prediction that failure to extend Title VI to March 31, 1949, will mean a loss of 100,000 dwelling units. His estimate may be too dark, but the lapse of Title VI will have a depressing effect on the housing curve.

The substitute housing measure contained nothing on federal aid for urban redevelopment (slum clearance) and public housing, on federal housing research, or on other disputed provisions.

Republican Presidential Nominee Thomas E. Dewey has declared his opposition to a summer session of Congress. His stand knocks out the possibility of a call by the majority leaders. It is less than likely that President Truman will want to summon Congress back to the capitol.

Signs of the moment point to a continued Republican majority in both houses of the next Congress. That prospect lends special interest to the party platform adopted last week in Philadelphia, particularly since Dewey has declared that he will stand solidly upon it during the campaign—and afterwards, if elected.

The housing plank in the new platform indirectly chides the last Congress for not doing more on that issue. It favors broader action than the recent session was willing to accept.

On the housing question, the platform goes so far as to recommend federal aid to the states for local slum clearance and low-rental housing programs where there is a need that cannot be met by private enterprise or by the states and localities. Except for insertion of the states, this is the same federal-aid principle expressed in the rejected T-E-W bill.

The platform writers also considered a broader endorsement of public power but the final language is reserved.

After a sentence recommending progressive development of the nation's water resources for navigation, flood control and power, the platform goes on to favor a comprehensive reclamation program in the use and control of water for irrigation and for power development incidental thereto. The "incidental thereto" hedge was written in to satisfy the large group on guard against government encroachment on private business.

Gen. Wheeler to stay as Chief of Engineers

Lt. Gen. R. A. Wheeler, Chief of the Army Corps of Engineers, has withdrawn his recent request for retirement. This action was taken at the request of Army Secretary Kenneth Royall, General Wheeler told *Engineering News-Record* in confirming the report that he was to continue.

Gen. Wheeler had announced his impending retirement nearly a month ago (*ENR* May 27, vol. p. 761) to be effective June 30. He would then have completed two and one-half years as head of the corps, and ended a 41-year Army career.

General Wheeler will be able to continue as Chief of Engineers for one year, during which he will reach the statutory age limit of 64. He is continuing in office to facilitate planning and execution of work covered by the largest peacetime appropriation for projects under the supervision of the Corps of Engineers.

DIVERSION STARTS—Builders of Davis Dam last week began to turn the Colorado River into a diversion channel through the Arizona abutment of the structure. The Utah Construction Co., after cutting earth plugs at either end of the channel, dumped rock into the stream bed to serve as a cofferdam. The channel shown above will become the forebay channel for the 225,000 kw. power plant and will also accommodate the spillway of the dam.

ASTM expands activities to meet need of studies on properties of materials

American Society for Testing Materials hears of new facets of its work at Detroit annual meeting

The need for more authoritative knowledge of properties of materials was emphasized in the 20 technical sessions and 400 committee meetings held last week during the 51st annual meeting of the American Society for Testing Materials, in Detroit.

Expansion of the activities of the ASTM to meet this challenge was pointed out in the annual report of the board of directors. Recently organized committees, such as C-19 on structural sandwich constructions formed last January, have already started to function and new committees are being appointed. Among them are E-12 on appearance standards, to develop and evaluate appearance properties of engineering materials (color, gloss, opacity and texture), and an undesignated committee on acoustical materials.

Also, expansion of activities of individual committees is taking place. For example, Committee D-19 on industrial waters has formed Subcommittee VII to undertake work on water-borne industrial wastes, but not including stream pollution beyond the effluent from the plant. Committee C-15 on manufactured masonry units and C-12 on mortars for unit masonry respectively reported organization of subcommittees on acid-resisting brick and mortar.

Approve Specifications

Also announced at the annual meeting were several new specifications of interest to civil engineers. One being developed by the subcommittee on structural steel for bridges, buildings and rolling stock contains all appropriate tables and tolerances of material common to the various structural specifications.

Tentative specifications for air-entraining portland cement (C175-47T) were revised to provide requirements covering an air-entraining Type III cement. Similarly, tentative specifications for portland blast-furnace slag cement (C205-47T) were changed to cover air entrainment.

Two significant revisions were made in standard specifications for portland cement (C150-47). Strength requirements for Type V cement were upped to equal those for Type II cement and 2 methyl 2-4 pentane diol, a product of the Master Builders Co., was declared a non-harmful addition when added in an amount not exceeding 0.03 percent by weight of cement, except that in Type III cement a maximum of 0.05 percent may be used. Previously, approval had been given to addition of TDA, manufactured by Dewey & Almy.

Tentative specifications advanced to standards include C94-47T for ready-mixed concrete, C125-46T defining terms relating to concrete and concrete aggregates, with a revision in the definition of admixtures. C208-46T for structural insulating board made from vegetable fibers, C193-44T for 85 percent magnesia thermal insulating cement, C194-44T for asbestos thermal insulating cement C196-47T for expanded or exfoliated vermiculite thermal insulating cement and C197-47T for diatomaceous silica thermal insulating cement, the last four with some revision.

Among new tentatives recommended are specifications covering mortar for unit masonry, asphaltic mixtures for sheet asphalt pavements, sampling bituminous paving mixtures and emulsified asphalt. The last consolidates five standards—D397, D398, D399, D401 and D631. The proposed tentative for mortar includes proportion requirements as well as those for properties.

Another indication of the ever-growing field was given by the selection of the topic for the 22nd Edgar Marburg Lecture—isotopes and their application in the field of industrial materials. The rich benefits atomic energy holds for science, medicine, agriculture and industry were outlined by Paul C. Aebersold, chief of the isotopes division, Atomic Energy Commission, Oak Ridge, Tenn. At present, the most constructive contribution appears to be radio active isotopes, which can be used as tracers in investigations to improve the quality of materials, efficiency of production and measurement of quantities. They may also supply radiation for special uses in material processing, such as radiography, liquid-level indication and thickness control.

Papers presented in the technical sessions pointed the way toward stronger and more durable materials of construction. For civil engineers, the highlights were the symposiums on concrete aggregates and corrosion of ferrous metals. Abstracts of several papers will appear in a subsequent issue.

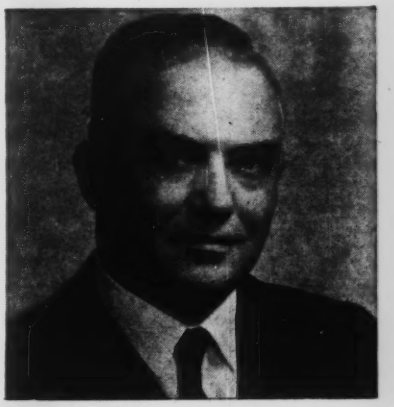
Fourteen papers were presented in a symposium summarizing present knowledge of the characteristics and uses of mineral aggregates.

Name civil engineers to head ASTM

Two civil engineers were elected to top positions in the American Society for Testing Materials last week and a third was awarded honorary membership.

Election of Richard L. Templin, assistant director of research and chief engineer of tests, Aluminum Company of America, as president and L. J. Markwardt, assistant director, U. S. Forest Products Laboratory, as vice president was announced at the 51st annual meeting of the organization in Detroit. F. H. Jackson, principal engineer of tests, Public Roads Administration, was honored with the special membership.

Mr. Templin received a bachelor of science degree in civil engineering from the University of Kansas, in 1915, and a master's degree in theoretical and applied mechanics from the University of



Richard L. Templin

Illinois in 1917. After two years with the National Bureau of Standards, he joined the aluminum company as chief engineer of tests.

Mr. Markwardt obtained his B. S. degree in civil engineering from the University of Wisconsin in 1912 and a C. E. degree in 1922. He has been in engineering research work at the U. S. Forest Products Laboratory at Madison, Wis., almost continuously since 1912, becoming assistant director in 1943.

Mr. Jackson is a graduate of Ohio State University. In 1905, he joined the staff of the U. S. Office of Public Roads. Since 1915 he has been intimately connected with investigations of non-bituminous road materials.

The Sanford E. Thompson award for a paper of outstanding merit on concrete went to W. C. Hanna, chief chemist, California Portland Cement Co., for his paper, on unfavorable chemical reactions of aggregates and a suggested corrective.

MEN AND JOBS

Francis L. Brown, who was executive assistant to Charles H. Sells, N. Y. State superintendent of public works, has been promoted to deputy superintendent, succeeding the late Claude A. Bonaporte. Mr. Brown is a graduate of Rensselaer Polytechnic Institute, 1931, and started with the Delaware and Hudson Railroad as a civil engineer. In 1934 he became resident engineer inspector for the Public Works Administration at Buffalo. He served as Washington County superintendent of highways from 1937 until 1947. He was also a member of the engineering firm of McFarland and Brown of Glens Falls and Binghamton. For four years he was a commander in the Navy Seabees.

Harry L. Maier, chief engineer of Wilmington, Del., for over 26 years, will retire from office on July 1. He began with Wilmington on April 4, 1904, as an engineer and has served continuously since. He was originally designated engineer in charge of sewers, became first assistant engineer in 1911, was made chief sewer engineer in 1918, and finally chief engineer on Oct. 15, 1921. He received his degree in civil engineering from Delaware College in 1901.

Lt. Col. Ralph D. King, director of the Waterways Experiment Station, Vicksburg, Miss., administers the oath of enlistment to reservists enlisting for assignment with the 434th Engineer Construction Battalion, being sponsored as a reserve unit by the Corps of Engineers agency. Left to right in the picture are Lt. Col. Eugene P. Fortson, Jr., Commanding Officer of the battalion, Staff Sergeant E. S. Melsheimer, Master Sergeant H. E. Wright, First Sergeant R. M. Rudd, Staff Sergeant C. J. Powell and Colonel King.

Some of the officers of the Pacific Northwest Sewage Works Association study the program during a lull in their recent meeting in Boise, Idaho. They are, (left to right) H. C. Clare, retiring president and director, Health Engineering Division, Department of Public Health, Boise, Idaho; W. B. Hughes, secretary-treasurer, city engineer, Lewiston, Idaho; K. H. Spies, newly-elected president and associate state sanitary engineer, Portland, Ore.; and E. C. Jensen, first vice-president and chief, Division of Public Health Engineering, Seattle, Wash.

J. R. Menzies, formerly supervising engineer, Atlantic region, has been named chief engineer of the public health branch of the Canadian Department of National Health and Welfare, Ottawa.

C. R. Kimball has been named city engineer by the Ogden, Utah, City Commission. He has been acting in that capacity since the resignation of Winn Templeton last fall.

Appointment of **Philip F. Carothers,** of Mill Hall, and **Merle R. Apgar,** of Wellsboro, as project engineers for the Pennsylvania Highways Department has been announced. Carothers is assigned to District 2, Clearfield, and Apgar to District 3, Williamsport. The department also announced the resignations of **Joseph S. Weir,** of Wyoming, Pa., project engineer in District 4, Scranton, and **J. Milton Coleman,** of Holicong, project engineer in District 5, Ardmore.

Charles M. Wellons has retired after more than 30 years of service with the U. S. Army Corps of Engineers, and is going to South America to become chief engineer of Damon, Dinerman & Co. of Panama. He will develop a plan for utilization of water resources of the Juramento Valley in Argentina, and live in Buenos Aires. He first joined the Army engineers at Wheeling, W. Va., in 1917; later he was moved to Pittsburgh, and was in charge of the design of a number of locks and dams on the Ohio, Monongahela, and Allegheny rivers. He also directed design of many other flood control reservoirs, including Tygart River, Crooked Creek, Tionesta, Mahoning Creek, Loyalhanna, Youghiogheny, and Conemaugh. He was commissioned a lieutenant colonel in 1942 and for a time was put in charge of the Pittsburgh office as acting district engineer during and just after the war. He was put on an inactive

Henry Kaiser (right) and his chief engineer George Havas, consult about the Eagle Mountain Railway which is to be built to bring iron ore from Eagle Mountain to the Fontana, Calif., steel mill of the Henry J. Kaiser Co.

status in March, 1946, after being promoted to colonel.

R. E. Leach, vice-president in charge of construction of the Bowers Construction Co. of Raleigh, N. C., is supervising the construction of a new highway bridge to be built by the state highway department across the French Broad River at West Asheville, N. C.

R. L. Barnett, former engineer for the Charlotte Park Association, Inc., has been named engineer for the city park and recreation commission at Charlotte, N. C., in charge of all park engineering work.

Pennsylvania's Department of Health has announced the resignation of **Willard S. Sitler,** of Millersburg, as advanced sanitary engineer.

Patrick J. Whalen, has been appointed city engineer at Missoula, Mont., to succeed William D. Vealey, who resigned after holding the post since Jan. 12.

Lt. Col. J. P. Carriere, city engineer and manager of Hull, Que., has resigned to go with a Montreal contracting company.

H. O. Wray has been appointed chief engineer of the Texas City, Tex., Terminal Ry. Co.

Henry Atteberry, Munfordville, Ky., has been appointed acting director of the engineering and construction division of Kentucky, succeeding **Evans C. McGraw,** Lexington, resigned. Atteberry had been serving as administrative assistant to McGraw.

Keyes C. Gaynor has been appointed city engineer of Sioux City, Iowa, a position that he has filled twice previously. The place has been vacant following the resignation of Leon Winter on April 1, 1946.

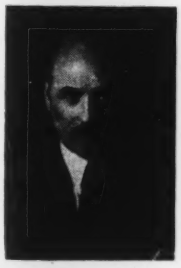
Col. John Lausdale, tax commissioner and valuation engineer at Houston, Tex., for the Southern Pacific Railroad Lines in Texas and Louisiana, has retired. In World War I, he served with the U. S. Army Engineers in France, building Army docks and railroads. Positions he held before that war included assistant engineer for the Southern Pacific Lines at San Francisco and valuation engineer for the Pacific Electric Co. of Los Angeles.

West Virginia State Road Commissioner Ray Cavendish has announced the appointment of **Robb Gover** as District Four engineer with headquarters in Clarksburg, succeeding Peter A. Wadsworth, resigned. Gover, assistant to the chief engineer, is a veteran West Virginia Road Commission engineer.

Harold A. Kemp, District of Columbia director of sanitary engineering, has been made consultant on engineering for the Office of Civil Defense Planning. Kemp will continue in his District post but will serve as consultant to William D. Wright, staff adviser on engineering in preparing "general engineering specifications for civilian defense in the event of future enemy attacks."

Edwin A. Dorner has been named resident engineer at Kelso, Wash., for the Seattle, Wash., consulting engineering firm of DeWitt C. Griffin & Associates, which has contracted its engineering services to that city.

Harry S. Palmer, cadastral engineer in the Reno, Nev., office of the Bureau of Land Management, has retired after 42 years of government service. Mr. Palmer attended the University of Nevada and took a position in the Reno office of the U. S. Surveyor General in 1906.



Ole Singstad, (left) consulting engineer, and Eugene E. Halmos, consultant, Knappen, Tippetts, Abbett Engineering Co., are on a trip through South America on behalf of that company, in connection with engineering studies for the vehicular tunnel under the Riachuslo River in Buenos Aires, Argentina, and for the proposed rapid transit system in Sao Paulo, Brazil.

Robert B. Richardson, newly appointed director of Highways for the Louisiana Department of Highways, was graduated from Louisiana Polytechnic Institute in 1920. Mr. Richardson joined the department in 1921 and since has been instrument man, resident engineer, district engineer, chief construction engineer, and construction and maintenance engineer. He was appointed acting director on September 15, 1947, and served until November 1, when Governor Davis appointed J. L. V. Grenier. He was reappointed by Gov. Earl K. Long.

James E. Morrison (left), manager of the public utilities, Renton, Wash., receives the congratulations of N. T. Veatch, retiring AWWA president, on his election as chairman of the Pacific Northwest Section, AWWA.

The Schenectady, N. Y., water department is managed by John H. Burwell who recently took time off to tell an *ENR* editor how a well-supply was developed several years ago to meet a rapidly increasing demand.

George G. Fassnacht, sanitary engineer, State Board of Health, Indianapolis, Ind., (left) was glad to see Roy F. Weston, sanitary engineer, Atlantic Refining Co., Philadelphia, Pa., at Atlantic City, N. J., recently.

OBITUARY

Leo J. Fischer, 65, who resigned last December as chairman of the board of the Thompson-Starrett Co., Inc., New York engineers and contractors, with which firm he had been associated for 45 years, died in New York City June 22. He started with the Geo. A. Fuller Construction Co. in Chicago and in 1903 left to join the Chicago office of the Thompson-Starrett Co., and three years later moved to New York to organize the New York branch. Soon afterward he was named first vice-president and general manager. In 1928 he became president and in 1935 chairman of the board. During the 42 years from his appointment as first vice-president until his retirement, the company performed contracts worth a billion dollars, one of the most important being an $80,000,000 share in the construction of the Grand Coulee Dam.

Charles D. Ridgway, 64, civil engineer and former refining company executive, died June 16 at Princeton, N. J. He was a graduate of Princeton University. He was a branch manager in the Dominican Republic for the Corn Products Refining Co., retiring last fall after 30 years.

C. R. McCort, 55, retired consulting engineer of Montreal, Que., died there June 18.

George Preston Coleman, 78, civil engineer and organizer and first president of the American Association of State Highway Officials, and a former president of the American Road Builders Association, died June 17 in Williamsburg, Va. Mr. Coleman was a former state highway commissioner. He was educated at the College of William and Mary, after which he engaged in engineering work in Mississippi, Georgia, West Virginia and Minnesota, serving as city engineer in Winona, Minn., from 1901 to 1906. Mr. Coleman was assistant state highway commissioner of Virginia from 1906 to 1911 and commissioner from 1911 to 1923. He was a leader in the development of Virginia's highway system and organizer of the Virginia Road Builders Association.

Francois E. Matthes, 74, geologist with the U. S. Geological Survey for 51 years when he retired a year ago, died in Berkeley, Calif., June 21. He was born in Amsterdam, Holland, and obtained a bachelor of science degree from Massachusetts Institute of Technology in 1895. He joined the Geological Survey the following year. He was an authority on glaciers, directed topographic surveys of the Big Horn Mountains in Wyoming; Glacier National Park, Grand Canyon, Yosemite Valley and Mt. Rainier National Park. He also made geological studies in Yosemite and Sequoia National Parks, and the Central Mississippi Valley.

Arthur M. Drummond, 45, assistant superintendent of the Fort Wayne, Ind., city sewer department, was drowned June 19, while vacationing at Mac's Portage Camp, Ont., Canada. With the city water department eight years, he joined the sewer department in 1942.

James T. Madison, 65, former bridge maintenance engineer of the Kentucky highway department, with which he was connected for 27 years, died in Frankfort, June 20.

James E. Cuff, 58, of Rochester, N. Y. died June 2. He was graduated from Cornell University as a civil engineer in 1912 and had a career on hydroelectric jobs in this country, Spain and South America.

James A. Chamberlin, 67, retired director of the Idaho state planning survey, died in Boise, June 12. He went to the Montana and Idaho area in 1907 as construction engineer for the Milwaukee Railroad and in 1910 went to Canada as division engineer for the Canadian Northern in charge of location and construction between Kamloops and Yellowhead. In 1914 he was railroad and construction engineer for the Weyerhauser Timber Co.

Norman E. D. Sheppard, 58, a civil engineer graduate of the University of Toronto, 1914, died June 15. He had been connected with the Canadian Engineering Institute, and he established Canadian Engineering Publications, Ltd.

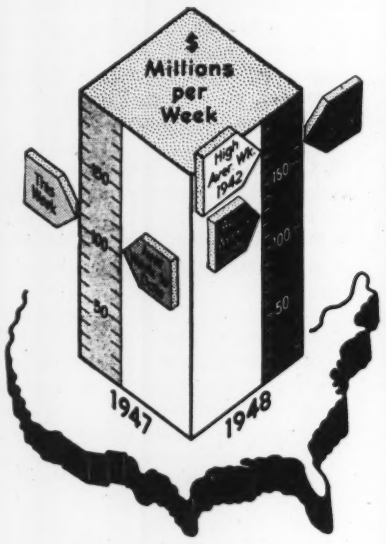
THE COVER PICTURE

The new Des Joachims power plant now under construction on the Ottawa River by the Hydro-Electric Power Commission of Ontario will have an ultimate capacity of 480,000 hp., in eight generating units.

Concrete has already been placed for the first section of the main dam, and beyond this finished portion, Bailey bridge towers have been erected to carry the conveyor system to place concrete in the remainder of the structure.

The dam is to be 2,400 ft. long at crest, with a maximum height of 190 ft.

CONSTRUCTION ACTIVITY



As Reported this week to ...
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

	Week of July 1 1948	Cumulative 1948 (27 wks.)	Cumulative 1947 (27 wks.)
Federal	$21,803	$548,966	$361,975
State & Mun.	64,477	1,246,313	844,682
Total Public.	$86,280	$1,795,279	$1,206,657
Total Private	74,643	$1,699,013	$1,572,807
U. S. Total..	**$160,923**	**$3,494,292**	**$2,779,464**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1948 (27 wks.)	Cumulative 1947 (27 wks.)
Waterworks ...	$2,156	$100,619	$58,018
Sewerage	6,298	109,055	67,004
Bridges	7,669	153,527	84,481
Highways	31,452	511,036	403,758
Earthwork, Waterways	6,038	278,488	166,571
Buildings, Public	26,655	538,071	279,196
Industrial ...	19,988	541,152	399,223
Commercial ..	46,499	1,011,160	926,129
Unclassified ...	14,168	253,204	395,084

NOTE: Minimum size projects included are: Waterworks and waterway projects, $28,000; other public works, $50,000; industrial buildings, $68,000; other buildings, $250,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1948 (27 wks.)	Cumulative 1947 (27 wks.)
NON-FEDERAL	$2,345,812	$939,919
Corporate Securities	1,382,681	345,666
State and Municipal	963,131	594,253
Total Capital	**$2,345,812**	**$939,919**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	July '48	463.23	222.67
Building Cost	July '48	342.42	185.10
Volume	June '48	282	124